United States Department of the Interior

FISH AND WILDLIFE SERVICE

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In Reply, Refer To: 11440-2002-873.1

April 24, 2003

Gary N. Hamby
Division Administrator, California Division
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

Subject: Programmatic Biological Opinion for Projects Funded or Approved under the Federal Aid Program (HDA-CA, File #: Section 7 with Ventura USFWS, Document #: S38192) (1-8-02-F-68)

Dear Mr. Hamby:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion regarding projects funded under the Federal Highway Administration's Federal aid program that are likely to adversely affect the federally threatened California red-legged frog (*Rana aurora draytonii*). This biological opinion, which has been prepared in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), evaluates the effects of certain activities, authorized by the Federal Highway Administration, on the California red-legged frog within the Ventura Fish and Wildlife Office's area of responsibility in San Benito, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties, California. Your request for formal consultation, dated March 1, 2002, was received on March 5, 2002.

This biological opinion was prepared primarily with information in the Service's files. A complete administrative record of this consultation is on file in the Ventura Fish and Wildlife Office.

CONSULTATION HISTORY

The Federal Highway Administration has consulted with the Service's Ventura Fish and Wildlife Office on numerous projects that were likely to adversely affect the California red-legged frog. The Service and the Federal Highway Administration recognize that many of these projects resulted in minor effects to the species and its habitat; additionally, many of the protective measures included in previous biological opinions were very similar. Consequently, the Service and the Federal Highway

Administration determined that a programmatic approach to the consultation process was appropriate. Staff from the Service, Federal Highway Administration, and California Department of Transportation coordinated extensively during the preparation of this biological opinion.

ADMINISTRATION OF THE BIOLOGICAL OPINION

This programmatic consultation will be implemented in the following manner. The Federal Highway Administration will begin the consultation process by determining if its proposed action may affect the California red-legged frog, as required by the implementing regulations for section 7 of the Act. If the Federal Highway Administration determines the project may affect, but is not likely to adversely affect the California red-legged frog, it will seek the Service's concurrence in writing pursuant to 50 Code of Federal Regulations 402.14(b)(1).

If the Federal Highway Administration determines that a proposed action is likely to adversely affect the California red-legged frog, it will then consider whether the action meets the suitability criteria for use of the programmatic biological opinion. If the Federal Highway Administration determines that use of the programmatic biological opinion is appropriate, it will initiate formal consultation and note that the proposed action meets the suitability criteria; this initiation will be in writing. If the Service agrees that use of the programmatic consultation is appropriate, it will issue a biological opinion that is tiered from this biological opinion; this project-specific biological opinion will contain an incidental take statement. The regulations which implement section 7 allow the Service up to 90 days to conclude formal consultation and an additional 45 days to prepare our biological opinion. However, this programmatic biological opinion should facilitate the consultation process; therefore, we will attempt to issue our tiered biological opinion in less time.

If the Federal Highway Administration determines that the potential effects of the proposed action, including the indirect, interrelated and interdependent effects, have not been evaluated in this programmatic biological opinion, the standard provisions for section 7 consultation will apply throughout the remainder of the consultation process. If the Service disagrees with the Federal Highway Administration's determination regarding use of the programmatic biological opinion, it will notify the Federal Highway Administration, in writing, within 30 days of the receipt of the request for consultation and provide a detailed explanation of its decision. If the Service requires additional information to complete its biological opinion, it will describe its needs in this letter; if additional information is not required, the Service will consider consultation to have been initiated on the date it received the original request for use of the programmatic consultation.

The Federal Highway Administration may approve or fund projects by various state or local sponsors, including the California Department of Transportation, counties, and cities. Although the Federal Highway Administration will always be responsible for ensuring compliance with the provisions of this biological opinion, the sponsoring agencies may participate in coordination with the Federal Highway Administration in developing measures to protect the California red-legged frog for specific projects. With the agreement of the Federal Highway Administration, the sponsoring agencies may work directly with the Service on specific projects.

Upon initiation, the Federal Highway Administration would provide the Service the following information in a site survey report:

1. a 7.5-minute topographic map or a copy of the appropriate topographic map with the name of the map. The locations of the project, any restoration sites, and proposed relocation sites, if necessary, for California red-legged frogs will be marked on the map;

2. a written description of the activity, including but not limited to, construction methods, time of year the work would occur, habitat restoration plan, and construction monitoring plan;

3. one cross section and a minimum of one plan view indicating water bodies, vegetation types, work areas, roads (including temporary construction access roads), restoration sites, refueling and staging areas that will be located within the existing or proposed public right-of-way or temporary construction easements, and environmentally sensitive areas proposed to protect habitat of the California red-legged frog;

4. the names and credentials of biologists who will conduct surveys, monitor, and handle California red-legged frogs will be provided for specific projects. Once the Service approves a biologist, the Federal Highway Administration would not need to provide their credentials for subsequent projects; and

5. the results of information gathered by following the procedures in the Service's protocols for assessing habitat quality and field surveys for the California red-legged frog.

Maps or plan sheets will indicate the extent of habitat (as identified in the site survey report described in the previous paragraph) and the action area and locations where California red-legged frogs have been found. The "action area" is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR 402.02). Through its biological opinion, the Service will either concur with the extent of habitat (and the action area) defined by Federal Highway Administration or provide a revised boundary accompanied by supporting rationale.

The Federal Highway Administration will provide a list of projects for which it used this consultation to the Service's Ventura Fish and Wildlife Office by January 31 of each year the consultation is in effect. The Federal Highway Administration will provide sufficient information on the list to identify the projects that occurred in the previous year under the provisions of this biological opinion. The annual list will assist the Ventura Fish and Wildlife Office in ensuring that it has received the project completion reports that are described later in this document. The Federal Highway Administration may also use the occasion of providing the list to recommend changes to the consultation that are more protective of the California red-legged frog and its habitat while simplifying compliance with the Act.

Staff from the Service will be available to provide technical assistance during all phases of the consultation. This technical assistance can include assisting the Federal Highway Administration

with determinations of effects, development of project-specific protective measures, modifications of survey protocols, and any other issue that may arise.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Suitability Criteria

To make use of the programmatic biological opinion, the Federal Highway Administration must ensure that the project satisfies the following criteria:

Criterion 1: Actions that would be appropriately considered in this consultation may adversely affect California red-legged frogs either by mortality or injury of individuals, through temporary disturbance or permanent loss of its upland, riparian, or wetland habitat, or both, but which nonetheless do not contribute to a decline of the species in the affected area. The Federal Highway Administration and Service have previously consulted on numerous projects that have met these criteria. These projects include: retrofitting of bridges to reduce damage that may be caused by earthquakes; repair, widening, and replacement of bridges; repair of bank protection; replacement of low-flow stream crossings with bridges; small-scale stabilization of stream slopes; minor improvement of drainage; replacement of culverts; rehabilitation of highway surfaces; and improvement of the safety and operation of highways.

Criterion 2: To qualify for use of the programmatic biological opinion, the measures to reduce or avoid adverse effects to California red-legged frogs provided in this biological opinion must be implemented; these measures may be modified on a project-specific basis upon the agreement of the Federal Highway Administration and Service.

Criterion 3: The projects must be single and complete projects and not part of larger actions or associated with other developments, such as housing subdivisions or golf courses.

Criterion 4: The projects must not, in the Service's view, take place in areas where populations of California red-legged frogs are so isolated that even the small effects described in the biological opinion may have substantial impacts.

Minimization of Adverse Effects

The Federal Highway Administration will ensure that projects being implemented in accordance with this biological opinion will be designed to avoid or reduce adverse effects to California red-legged frogs and their habitat. At a minimum, the following measures will be taken to reduce adverse effects to California red-legged frogs and their habitat:

1. Only Service-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

2. Ground disturbance will not begin until written approval is received from the Service that the biologist is qualified to conduct the work.

3. A Service-approved biologist will survey the project site 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to move them from the site before work activities begin. The Service-approved biologist will relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The Service-approved biologist will maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

4. Before any activities begin on a project, a Service-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

5. A Service-approved biologist will be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, the state or local sponsoring agency will designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist will ensure that this monitor receives the training outlined in measure 4 and in the identification of California red-legged frogs. If the monitor or the Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected to a degree that exceeds the levels anticipated by the Federal Highway Administration and Service during review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the effect immediately or require that all actions which are causing these effects be halted. If work is stopped, the Service will be notified as soon as is reasonably possible.

6. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

7. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Federal Highway Administration will ensure that a plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

8. Project sites will be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials will be used to the extent practicable. Invasive, exotic plants will be controlled to the maximum extent practicable. This measure will be implemented in all areas disturbed by activities associated with the project, unless the Service and Federal Highway Administration determine that it is not feasible or practical. (For example, an area disturbed by construction that would be used for future activities need not be revegetated.)

9. Habitat contours will be returned to their original configuration at the end of project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the Service and Federal Highway Administration determine that it is not feasible or modification of original contours would benefit the California red-legged frog.

10. The number of access routes, size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

11. The Federal Highway Administration will attempt to schedule work activities for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and informal consultation between the Federal Highway Administration and Service during project planning should be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.

12. To control sedimentation during and after project implementation, the Federal Highway Administration and sponsoring agency will implement best management practices outlined in any authorizations or permits, issued under the authorities of the Clean Water Act, that it receives for the specific project. If best management practices are ineffective, the Federal Highway Administration will attempt to remedy the situation immediately, in consultation with the Service

13. If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering will be determined by the Federal Highway Administration in consultation with the Service on site-specific basis. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the stream bed will be minimized to the maximum extend possible; any imported material will be removed from the stream bed upon completion of the project.

14. Unless approved by the Service, water will not be impounded in a manner that may attract California red-legged frogs.

15. A Service-approved biologist will permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist will be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.

16. The Federal Highway Administration will reinitiate consultation when, as a result of projects conducted under the provisions of this consultation:

    a. 10 California red-legged frogs have been killed or injured in any given year. (For this and all other standards, an egg mass is considered to be one California red-legged frog.);

    b. 50 California red-legged frogs have been killed or injured in total;

    c. 20 acres of wetland and riparian habitat have been permanently lost in any given year;

    d. 100 acres of wetland and riparian habitat have been permanently lost in total;

    e. 100 acres of wetland and riparian habitat have been temporarily disturbed in any given year; or

    f. 500 acres of wetland and riparian habitat have been temporarily disturbed in total.

    If the Federal Highway Administration demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat temporarily disturbed (measure 16f).

17. To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. A copy of the code of practice is enclosed.

18. Upon completion of any project for which this programmatic consultation is used, the Federal Highway Administration will ensure that a project completion form is completed and sent to the Ventura Fish and Wildlife Office. A copy of the form is enclosed.

    The Federal Highway Administration should include recommended modifications of the protective measures if additional stipulations to protect the California red-legged frog are warranted or if alternative measures would facilitate compliance with the provisions of this consultation.

STATUS OF THE SPECIES

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 *Federal Register* 25813). A recovery plan has been published (Service 2002). Critical habitat for the California red-legged frog was designated on March 13, 2001 (66 *Federal Register* 14625). On November 6, 2002, the United States District Court for the District of Columbia set aside the designation and ordered the Service to publish a new final rule with respect to the designation of critical habitat for the California red-legged frog *(Home Builders Association of Northern California et al. versus Gale A Norton, Secretary of the Department of Interior et al.* Civil Action No. 01-1291 (RJL) U.S. District Court, District of Columbia.) Consequently, critical habitat will not be discussed further in this biological opinion.

Detailed information on the biology of California red-legged frogs can be found in Storer (1925), Stebbins (1985), and Jennings *et al.* (1992). This species is the largest native frog in the western United States, ranging from 1.5 to 5.1 inches in length. The abdomen and hind legs of adults are largely red; the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers, and dorsolateral folds are prominent on the back. Tadpoles range from 0.6 to 3.1 inches in length and are dark brown and yellow with dark spots.

California red-legged frogs spend most of their lives in and near sheltered backwaters of ponds, marshes, springs, streams, and reservoirs. Deep pools with dense stands of overhanging willows and an intermixed fringe of cattails are considered optimal habitat. Eggs, larvae, transformed juveniles, and adults also have been found in ephemeral creeks and drainages and in ponds that do not have riparian vegetation. Accessability to sheltering habitat is essential for the survival of California red-legged frogs within a watershed, and can be a factor limiting population numbers and distribution. Some California red-legged frogs have moved long distances over land between water sources during winter rains. Adult California red-legged frogs documented to move more than 2 miles in northern Santa Cruz County "without apparent regard to topography, vegetation type, or riparian corridors" (Bulger have been *in litt.* 2000 in 66 *Federal Register* 14625). Most of these overland movements occur at night.

California red-legged frogs breed from November through March with earlier breeding records occurring in southern localities. California red-legged frogs are often prolific breeders, typically laying their eggs during or shortly after large rainfall events in late winter and early spring. Embryos hatch 6 to 14 days after fertilization and larvae require 3.5 to 7 months to attain metamorphosis. Tadpoles probably experience the highest mortality rates of all life stages, with less than 1 percent of eggs laid reaching metamorphosis. Sexual maturity normally is reached at 3 to 4 years of age; California red-legged frogs may live 8 to10 years. Juveniles have been observed to be active diurnally and nocturnally, whereas adults are mainly nocturnal.

The diet of California red-legged frogs is highly variable. Invertebrates are the most common food items, although vertebrates such as Pacific chorus frogs (*Pseudacris regilla*) and California mice (*Peromyscus californicus*) can constitute over half of the prey mass eaten by larger frogs (Hayes and Tennant 1985). Larvae likely eat algae.

The California red-legged frog has been extirpated or nearly extirpated from 70 percent of its former range. Historically, this species was found throughout the Central Valley and Sierra Nevada foothills. At present, California red-legged frogs are known to occur in 243 streams or drainages from 22 counties, primarily in central coastal California. The most secure aggregations of California red-legged frogs are found in aquatic sites that support substantial riparian and aquatic vegetation and lack non-native predators. Over-harvesting, habitat loss, non-native species introduction, and urban encroachment are the primary factors that have negatively affected the California red-legged frog throughout its range (Jennings and Hayes 1985, Hayes and Jennings 1988). Ongoing causes of decline include direct habitat loss due to stream alteration and disturbance to wetland areas, indirect effects of expanding urbanization, and competition or predation from non-native species.

ENVIRONMENTAL BASELINE

This consultation addresses projects that the Federal Highway Administration may undertake in San Benito, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Los Angeles, and Ventura counties (Service 2002). All or portions of four recovery units are located in these counties.

The Central Coast Recovery Unit includes, generally, the coastal portions of Santa Cruz, Monterey, and San Luis Obispo counties. This recovery unit supports the greatest number of drainages currently occupied by the California red-legged frog.

The Diablo Range and Salinas Valley Recovery Unit includes, generally, San Benito County and the inland portions of Santa Cruz, Monterey, and San Luis Obispo counties. This recovery unit supports "no more than 10 percent of the historic localities [of the California red-legged frog] within the Salinas basin and inner Coast Ranges ..." (Service 2002).

Santa Barbara County and portions of San Luis Obispo, Ventura, and Los Angeles counties are within the Northern Transverse Ranges and Tehachapi Mountains Recovery Unit. California red-legged frogs are patchily distributed in the interior portion of this recovery unit. They occur in numerous coastal streams in Santa Barbara County.

Portions of Los Angeles and Ventura counties are within the Southern Transverse and Peninsular Ranges Recovery Unit. California red-legged frogs are patchily distributed in this recovery unit.

Subsequent biological opinions will address the Environmental Baseline of the action area for each specific project.

EFFECTS OF THE ACTION

Activities that are evaluated under this biological opinion are those that would not cause ecosystem-scale changes and are not likely to contribute to the decline of the California red-legged frog. Direct impacts to adults, sub-adults, tadpoles, and eggs of the California red-legged frog in the footprint of projects evaluated by this biological opinion include injury or mortality from being crushed by earth moving equipment, construction debris, and worker foot traffic. These impacts will be reduced by minimizing and clearly demarcating the boundaries of the project areas and equipment access routes and locating staging areas outside of riparian areas or other water bodies. Scheduling work activities to avoid sensitive areas, such as breeding pools during the breeding season and isolated aquatic refuges during dry periods, would substantially reduce adverse impacts.

The capture and handling of California red-legged frogs to move them from a work area may result in injury or mortality. Mortality may occur as a result of improper handling, containment, or transport of individuals or from releasing them into unsuitable habitat. Improper handling, containment, or transport of individuals would be reduced or prevented by use of a Service-approved biologist. Removal of exotic species from a project site is likely to increase the survival rate of California red-legged frogs; this measure would benefit the species.

Construction activities, including noise and vibration, may cause California red-legged frogs to temporarily abandon habitat adjacent to work areas. This disturbance may increase the potential for predation and desiccation when California red-legged frogs leave shelter sites.

Tadpoles may be entrained by pump intakes, if such devices are used to dry out work areas. Screening pump intakes with wire mesh with holes not larger than 0.2 inch will preclude larger tadpoles from entering the intakes.

Some potential also exists for disturbance of habitat to cause the spread or establishment of non-native invasive species, such as giant reed (*Arundo donax*) or salt cedar (*Tamarix* spp.). Once established, these species degrade habitat values through several mechanisms (Service 1999). Breeding pools surrounded by large amounts of salt cedar and giant reed may dry faster because of their rates of evapotranspiration are generally greater than those of native riparian species. The abundance and diversity of prey species are generally less in dense stands of giant reed and salt cedar than in areas dominated by native plants. Additionally, these invasive species can eventually out-compete native plant species and displace them; dense aggregations of salt cedar can cause soils to become hypersaline because these plants concentrate salt from water and then excrete it onto the surrounding ground. Measures to prevent the spread or introduction of these species, such as minimizing the number of access routes, size of staging areas, and the total area of the activity,

restoring disturbed areas with native species, and post-project monitoring and control of exotic species may reduce or eliminate this effect.

If water that is impounded during or after work activities creates favorable habitat for non-native predators, such as bullfrogs, crayfish, and centrarchid fishes, California red-legged frogs may suffer abnormally high rates of predation. Additionally, any time California red-legged frogs are concentrated in a small area at unusually high densities, native predators such as herons, egrets, opossums (*Didelphis virginiana*), and raccoons (*Procyon lotor*) may feed on them opportunistically. Finally, if these pools dry out as a result of construction activity, California red-legged frogs may die as a result of desiccation or be eaten by predators as they attempt to find other suitable habitat. The Federal Highway Administration's proposal to avoid impoundments of water is likely to reduce the likelihood that these effects would occur.

Trash left during or after project activities could attract predators to work sites, which could, in turn, prey on California red-legged frogs. For example, raccoons are attracted to trash and also prey opportunistically on California red-legged frogs. This potential impact will be reduced or avoided by careful control of waste products at all work sites.

Accidental spills of hazardous materials or careless fueling or oiling of vehicles or equipment could degrade aquatic or upland habitat to a degree where California red-legged frogs are adversely affected or killed. The potential for this impact to occur will be reduced by requiring: all refueling, maintenance, and staging of equipment and vehicles to occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat; the monitor to ensure contamination of habitat does not occur during such operations; that a plan is in place for prompt and effective response to any accidental spills; and all workers to be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Workers may intentionally or unintentionally disturb, injure, or kill California red-legged frogs. The potential for this impact to occur will be reduced by informing workers of the presence and protected status of this species and the measures that are being implemented to protect it during project activities.

Work in streams or in floodplains could cause unusually high levels of siltation downstream. This siltation could smother eggs of the California red-legged frog and alter the quality of the habitat to the extent that use by individuals of the species is precluded. Implementing best management practices and reducing the area to be disturbed to the minimum necessary will likely assist in reducing the amount of sediment that is washed downstream as a result of project activities.

The Federal Highway Administration has proposed that consultation would be reinitiated if 10 California red-legged frogs are killed or injured in any given year or if 50 California red-legged frogs are killed or injured in total. Because of the measures that the Federal Highway Administration has proposed to reduce the level of morality, we expect that few California red-legged frogs would be killed in any given year. Additionally, the loss of less than ten California red-legged frogs in any given year throughout the seven counties in which this consultation will be implemented will not

compromise the ability of the species to survive and recover because this number represents a very small portion of the total number of individuals present in this region. Additionally, given the reproductive biology of the California red-legged frog, under appropriate habitat conditions, the loss of a few individuals in any given drainage as a result of a project sponsored by the Federal Highway Administration would likely be undetectable within a few years.

Under the provisions of this consultation, some features of the site may be permanently or temporarily altered. For example, a bridge retrofitted for earthquake safety may have slightly larger footings as a result of the project. Such a minor loss of habitat is not likely to compromise the ability of a stream to support California red-legged frogs. Additionally, the upper limits that the Federal Highway Administration has proposed for annual and total loss and disturbance of habitat will ensure that the ability of the California red-legged frog to survive and recovery is not compromised. These upper limits for temporary disturbance (100 acres in any given year or 500 acres in total) and loss (20 acres in any given year or 100 acres in total) of wetland and riparian habitat would be spread across the seven counties in which this consultation would be used. Given the wide distribution of a relatively minor amount of disturbance or loss of wetlands and riparian areas, the high potential that most disturbance would recover within a few years, and the ability of the California red-legged frog to survive in varying conditions, we expect the overall effect on habitat of the California red-legged frog of the Federal Highway Administration's actions being considered in this programmatic consultation to be minor.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the Act.

At this time, we do not know the locations of the action areas in which projects sponsored by the Federal Highway Administration under the auspices of this consultation may occur, other than that they would be sited in San Benito, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties. Consequently, we cannot evaluate any cumulative effects at this time; we will conduct this analysis when we provide site-specific biological opinions.

CONCLUSION

After reviewing the current status of the California red-legged frog, the environmental baseline, the effects of the projects that are likely to be authorized under the provisions of the proposed programmatic consultation, and the cumulative effects, it is the Service's biological opinion that the projects likely to be proposed by Federal Highway Administration are not likely to jeopardize the continued existence of the California red-legged frog.

We have reached this conclusion because:

1. The Federal Highway Administration has proposed measures to reduce the adverse effects of the proposed activities on the California red-legged frog;

2. Few California red-legged frogs are likely to be killed or injured during project activities; and

3. In comparison with the amount of habitat available to the California red-legged frog in San Benito, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties, a relatively small amount of habitat is likely to be permanently lost or temporarily disturbed.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of an incidental take statement contained in a biological opinion.

This biological opinion evaluates the general nature of the effects on the California red-legged frog of a certain scale of actions that the Federal Highway Administration may undertake in San Benito, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties. However, we cannot assess the potential effects of specific actions because information on the location, timing, nature, and other aspects of the actions are not known at this time. Consequently, we cannot provide an exemption from the prohibitions against take, as described in section 9 of the Act, for the incidental take that may result from these actions. The incidental take statements contained in biological opinions for the Federal Highway Administration's specific actions will contain such exemptions, if appropriate.

REPORTING REQUIREMENTS

The enclosed project completion form describes the information that the Federal Highway Administration or sponsoring agency must provide to the Service upon the completion of specific projects.

DISPOSITION OF DEAD OR INJURED SPECIMENS

Direction regarding the disposition of dead or injured California red-legged frogs will be provided in each project-specific biological opinion.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. The Federal Highway Administration should require or encourage contractors and agencies conducting work on highways to protect other sensitive species during the implementation of these projects.

2. The Federal Highway Administration should participate in any regional planning efforts for the California red-legged frog to attempt to recognize, at an early stage of planning, where conflicts between conservation of the California red-legged frog and future transportation planning may arise.

The Service requests notification of the implementation of any conservation recommendations, so we may be kept informed of actions that minimize or avoid adverse effects to or benefit the California red-legged frog and its habitat.

REINITIATION NOTICE

This concludes formal consultation on projects funded under the Federal Highway Administration's Federal Aid program that are likely to adversely affect the federally threatened California red-legged frog. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law), and if (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the agency action is subsequently modified in a manner that causes an effect on listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat is designated that may be affected by the action.

If you have any questions, please contact Ray Bransfield of my staff at (805) 644-1766.

Sincerely,

Diane K. Noda

Diane K. Noda
Field Supervisor

Enclosures: Project Completion Form
The Declining Amphibian Populations Task Force Fieldwork Code of Practice

REFERENCES

Hayes, M.P., and M.R. Jennings. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana aurora draytonii*) and the foothill yellow-legged frog (*Rana boylii*): Implication for management. Pp. 144-158. In Proceedings of the symposium on the management of amphibians, reptiles, and small mammals in North America. R. Sarzo, K.E. Severson, and D.R. Patton (technical coordinators). U.S.D.A. Forest Service General Technical Report RM-166.

Hayes, M.P., and M.R. Tennant. 1985. Diet and feeding behavior of the California red-legged frog, *Rana aurora draytonii* (Ranidae). The Southwestern Naturalist 30(4):601-605.

Jennings, M.R., and M.P. Hayes. 1985. Pre-1900 over harvest of California red-legged frogs (*Rana aurora draytonii*): The inducement for bullfrog (*Rana catesbeiana*) introduction. Herpetologica 31(1):94-103.

Jennings, M.R., M.P. Hayes, and D.C. Holland. 1992. A petition to the U.S. Fish and Wildlife Service to place the California red-legged frog (*Rana aurora draytonii*) and the western pond turtle (*Clemmys marmorata*) on the list of endangered and threatened wildlife and plants.

Stebbins, R.C. 1985. A field guide to western reptiles and amphibians. Houghton Mifflin Company, Boston, Massachusetts.

Storer, T.I. 1925. A synopsis of the Amphibia of California. University of California Publications in Zoology 27:1-342.

U.S. Fish and Wildlife Service. 1999. Recovery plan for the arroyo southwestern toad. Portland, Oregon.

U.S. Fish and Wildlife Service. 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). Portland, Oregon.

Project Completion Report for Federal Highway Administration projects that may affect California red-legged frogs

The Federal Highway Administration must ensure that this form is completed or that the requested information is provided in a written report upon completion of the project and restoration activities.

Mail completed form or report to:

U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003
(805) 644-1766

1. Project title and location:
2. Project Completion Dates A. Construction: B: Restoration:
3. Type of actions that occurred:
4. Habitat type and number of acres affected (e.g., upland, riparian)
5. Linear feet of work in a stream:
6. How the site was restored and a description of the area after completion of the action:
7. If no restoration occurred, the justification for not conducting this work:
8. Which measures were employed to protect California red-legged frogs:
9. The number of California red-legged frogs taken and the form of take:
10. The number of California red-legged frogs removed from work areas to nearby undisturbed habitat and the location of that habitat:

11. Recommendations of any modifications to future measures to enhance protection of the California red-legged frog while simplifying compliance with the Endangered Species Act:

The Declining Amphibian Populations Task Force Fieldwork Code of Practice

1. Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires, and all other surfaces. Rinse cleaned items with sterilized (e.g., boiled or treated) water before leaving each work site.

2. Boots, nets, traps, and other types of equipment used in the aquatic environment should then be scrubbed with 70 percent ethanol solution and rinsed clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond. wetland, or riparian area.

3. In remote locations, clean all equipment with 70 percent ethanol or a bleach solution, and rinse with sterile water upon return to the lab or "base camp" Elsewhere, when washing-machine facilities are available, remove nets from poles and wash in a protective mesh laundry bag with bleach on the "delicates" cycle.

4. When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable gloves and change them between handling each animal. Dedicate sets of nets, boots, traps, and other equipment to each site being visited. Clean them as directed above and store separately at the end of each field day.

5. When amphibians are collected, ensure that animals from different sites are kept separately and take great care to avoid indirect contact (e.g., via handling, reuse of containers) between them or with other captive animals. Isolation from unsterilized plants or soils which have been taken from other sites is also essential. Always use disinfected and disposable husbandry equipment.

6. Examine collected amphibians for the presence of diseases and parasites soon after capture. Prior to their release or the release of any progeny, amphibians should be quarantined for a period and thoroughly screened for the presence of any potential disease agents.

7. Used cleaning materials and fluids should be disposed of safely and, if necessary, taken back to the lab for proper disposal. Used disposable gloves should be retained for safe disposal in sealed bags.

The Fieldwork Code of Practice has been produced by the Declining Amphibian Populations Task Force with valuable assistance from Begona Arano, Andrew Cunningham, Tom Langton, Jamie Reaser, and Stan Sessions.

For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK.
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